

Lampiran 3. Perhitungan Data

1.1 Perhitungan % rendemen ekstrak kasar buah cabai jawa

$$\begin{aligned} \% R &= \frac{\text{berat ekstrak kental}}{\text{berat sampel}} \times 100 \% \\ &= \frac{7,337 \text{ gram}}{350 \text{ gram}} \times 100 \% \\ &= 2,096 \% \end{aligned}$$

1.2 Perhitungan pengenceran larutan induk ekstrak kasar dan nanopartikel ekstrak cabai jawa pada konsentrasi 0,1 %; 0,2 %; 0,3 % dalam media PDA

a. Konsentrasi 0,1 %

$$\begin{aligned} V_1.M_1 &= V_2.M_2 \\ V_1.0,6 \% &= 10 \text{ mL} . 0,1 \% \\ V_1 &= \frac{10 \text{ mL} . 0,1 \%}{0,6 \%} \\ V_1 &= 1,67 \text{ mL} \end{aligned}$$

b. Konsentrasi 0,2 %

$$\begin{aligned} V_1.M_1 &= V_2.M_2 \\ V_1.0,6 \% &= 10 \text{ mL} . 0,2 \% \\ V_1 &= \frac{10 \text{ mL} . 0,2 \%}{0,6 \%} \\ V_1 &= 3,3 \text{ mL} \end{aligned}$$

c. Konsentrasi 0,3 %

$$\begin{aligned} V_1.M_1 &= V_2.M_2 \\ V_1.0,6 \% &= 10 \text{ mL} . 0,3 \% \\ V_1 &= \frac{10 \text{ mL} . 0,3 \%}{0,6 \%} \\ V_1 &= 5 \text{ mL} \end{aligned}$$

2.3 Perhitungan persentase daya hambat pertumbuhan jamur

a. Ekstrak etanol 0,1%

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 2,41}{2,89} \times 100 \% \\ &= 16,71\% \end{aligned}$$

$$\begin{aligned} P_2 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 2,30}{2,89} \times 100 \% \\ &= 20,42\% \end{aligned}$$

$$\begin{aligned} P_3 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 2,44}{2,89} \times 100 \% \\ &= 15,72\% \end{aligned}$$

b. Ekstrak etanol 0,2 %

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 1,79}{2,89} \times 100 \% \\ &= 38,21\% \end{aligned}$$

$$P_2 = \frac{D_1 - D_2}{D_1} \times 100 \%$$

$$= \frac{2,89 - 1,85}{2,89} \times 100 \% = 33,76\%$$

$$\begin{aligned} P_3 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 1,91}{2,89} \times 100 \% \\ &= 33,76\% \end{aligned}$$

c. Ekstrak Etanol 0,3%

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 1,37}{2,89} \times 100 \% \\ &= 52,55\% \end{aligned}$$

$$\begin{aligned} P_2 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 1,4}{2,89} \times 100 \% \\ &= 51,56\% \end{aligned}$$

$$\begin{aligned} P_3 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{2,89 - 1,57}{2,89} \times 100 \% \\ &= 45,63\% \end{aligned}$$

d. Nanopartikel Ekstrak Etanol 0,3%

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,1}{1,58} \times 100 \% \\ &= 93,65\% \end{aligned}$$

$$\begin{aligned} P_2 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,1}{1,58} \times 100 \% \\ &= 93,65\% \end{aligned}$$

$$\begin{aligned} P_3 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,15}{1,58} \times 100 \% \\ &= 90,48\% \end{aligned}$$

d. Nanopartikel Ekstrak Etanol 0,2%

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,1}{1,58} \times 100 \% \\ &= 93,65\% \end{aligned}$$

$$\begin{aligned} P_2 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,15}{1,58} \times 100 \% \end{aligned}$$

$$= 90,48\%$$

$$\begin{aligned} P_3 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,2}{1,58} \times 100 \% \\ &= 87,31\% \end{aligned}$$

e. Nanopartikel Ekstrak Etanol 0,3%

$$\begin{aligned} P_1 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,1}{1,58} \times 100 \% \\ &= 93,65\% \end{aligned}$$

$$\begin{aligned} P_2 &= \frac{D_1 - D_2}{D_1} \times 100 \% \\ &= \frac{1,58 - 0,15}{1,58} \times 100 \% \\ &= 90,48\% \end{aligned}$$

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